

## REMARKS

In response to the above-identified Office Action, Applicants amend the application and seek reconsideration thereof. In this response, Applicants amend Claim 1, and cancel Claim 2. Accordingly, Claims 1, 3, and 9-14 are pending.

Attached hereto is a marked-up version of the changes made to the claims by the current amendment. The attachment is captioned "Version With Markings To Show Changes Made."

In the Office Action mailed September 9, 2002, the Examiner objected to Claim 1 because the claim contains a subscript limitation not found in the formula. To the extent that the objection applies to the amended claim, Applicants respectfully traverse the rejection. Applicants have removed the subscript limitation from Claim 1 and respectfully request that the Examiner withdraw the objection to Claim 1.

In the Office Action, the Examiner rejected Claims 1-3, and 9 under 35 U.S.C. § 102(b) as being anticipated by Li (WO97/49136) ("Li"). To the extent that the rejection applies to the amended claims, Applicants respectfully traverse the rejection. Applicant respectfully submits that Li teaches, "alkali metal-mixed transition metal oxide core. . . (or) . . . a lithiated transition metal oxide, or mixed transition metal oxide." (Li, page 5, lines 9-12.) Li also teaches, "the most preferred core compositions would comprise lithium nickel dioxide, or a lithium nickel cobalt dioxide having the formula  $\text{LiNi}_{1-y}\text{Co}_y\text{O}_2$ ." (Li, page 6, lines 4-6.)

Applicants respectfully submit that Claim 1 recites the limitation of a positive active material compound that comprises  $\text{Li}_a\text{Ni}_{1-x-y}\text{Co}_x\text{M}_y\text{O}_2$ . Applicants respectfully submit that Li does not teach or suggest a positive active material compound with a formula as recited in Applicants' Claim 1. For at least the reasons stated above, Applicants respectfully submit that Li does not anticipate Applicants' independent Claim

1 and dependent Claims 2-3 and 9. Applicants respectfully request that the Examiner withdraw the rejection to Claims 1-3, and 9.

In the Office Action, the Examiner rejected Claims 1-3, and 9 under 35 U.S.C. § 102(e) as being anticipated by Kweon et al. (U.S. Patent No. 6,372,385) ("Kweon"). To the extent that the rejection applies to the amended claims, Applicants respectfully traverse the rejection.

*not contrary*  
Applicants are respectively submitting herewith a Declaration by a common inventor of Kweon and the present Application showing that the invention of Kweon is not by "another." In addition, Applicants respectfully submit that a certified copy of Korean Application No. 99-22765, which was filed in Korea on June 17, 1999, was filed with the U.S. Patent and Trademark Office on June 16, 2000.

Since the Kweon patent is not "by another", Applicants respectfully request that the Examiner withdraw the rejection to Claims 1-3, and 9 under 35 U.S.C. § 102(e) as being anticipated by Kweon.

In the Office Action, the Examiner rejected Claims 1 and 2 under 35 U.S.C. § 102(e) as being anticipated by Miyaki et al. (U.S. Patent No. 6,365,299) ("Miyaki"). To the extent that the rejection applies to the amended claims, Applicants respectfully traverse the rejection.

Applicants respectfully submit that Miyaki teaches coating the positive electrode active material with an oxide having a different chemical formula from the positive electrode active material. Preferred examples of the metal oxide include  $\text{PbO}_2$ ,  $\text{Fe}_2\text{O}_3\text{SnO}_2$ ,  $\text{In}_2\text{O}_3$ , and  $\text{ZnO}$  . . . (particularly preferred) . . .  $\text{SiO}_2$ ,  $\text{SnO}_2$ ,  $\text{Fe}_2\text{O}_3$ ,  $\text{ZnO}$ , and  $\text{PbO}_2$ . (Miyaki, col. 16, lines 4-16.)

Applicants respectfully submit that Applicants' Claim 1 recites the limitation that the metal oxide coated on the surface of the compound is an oxide of a metal selected from the group consisting of Mg, Ti, Al, V, Co, K, Ca, Na, and B.

Applicants respectfully submit that Miyaki does not teach or suggest the desirability of the metal oxides as recited in Applicants' independent Claim 1.

Applicants respectfully request that the Examiner withdraw the rejection to Claims 1 and 2.

In the Office Action, the Examiner rejected Claims 10 and 11 under 35 U.S.C. § 103(a) as being unpatentable over Miyasaka (U.S. Patent No. 6,037,095) ("Miyasaka") in view of Nishida et al. (Japanese Patent Abstract Publication No. 08-236114) ("Nishida"). Applicants respectfully traverse the rejection.

As the Examiner noted in the Office Action, "Miyasaka does not explicitly state the positive active material is coated with a metal oxide." In addition, Applicants respectfully submit that Miyasaka does not implicitly state the positive active material is coated with a metal oxide, or suggest the desirability of coating the positive active material with metal oxide.

Miyasaka teaches that the surface of the positive active electrode material can be modified, and gives examples of treating within an esterifying agent or chelating agent, coating with an electro-conductive polymer or polyethylene oxide, or coating with an iron-conductive polymer or a poly-acetylene layer, or treated with a lithium salt (Miyasaka, col. 10, lines 48-56). Applicants respectfully submit that Miyasaka does not teach or suggest the desirability of coating the positive active material with a metal oxide, in general, nor does Miyasaka teach or suggest the desirability of coating with the particular metal oxides as recited in Applicants' Claims 10 and 11.

Applicants respectfully submit that Nishida does not remedy the defects of Miyasaka. Applicants respectfully submit that the Examiner has failed to establish a *prima facie* case of obviousness since there is no suggestion or motivation to modify the reference or to combine the reference teachings. (MPEP § 2142.) Applicants respectfully submit that the Examiner is utilizing impermissible hindsight to remedy the defects of Miyasaka with the teachings of Nishida.

Applicants respectfully request that the Examiner withdraw the rejections to Claims 10 and 11.

In the Office Action, the Examiner rejected Claims 10 and 11 under 35 U.S.C. § 103(a) as being unpatentable over Miyasaka in view of Kweon. Applicants respectfully traverse the rejection.

As discussed above, Applicants respectfully submit that Kweon is not prior art to the present Application.

Applicants respectfully request that the Examiner withdraw the rejection to Claims 10 and 11.

In the Office Action, the Examiner stated that Claims 12-14 are allowed. Applicants would like to thank the Examiner for stating that Claims 12-14 are allowed.

### **CONCLUSION**

In view of the foregoing, it is believed that all claims now pending patentably define the subject invention over the prior art of record and are in condition for allowance and such action is earnestly solicited at the earliest possible date.

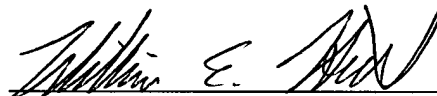
If necessary, the Commissioner is hereby authorized in this, concurrent and future replies, to charge payment or credit any overpayment to Deposit Account No.

02-2666 for any additional fees required under 37 C.F.R. §§1.16 or 1.17, particularly,  
extension of time fees.

Respectfully submitted,

BLAKELY, SOKOLOFF, TAYLOR & ZAFMAN LLP

Dated: 12/20/02

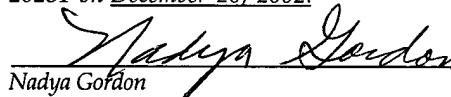


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**CERTIFICATE OF MAILING:**

*I hereby certify that this correspondence is being deposited as First Class Mail with the United States Postal Service in an envelope addressed to: Assistant Commissioner for Patents, Washington, D.C. 20231 on December 20, 2002.*



Nadya Gordon

12/20/02  
Date

VERSION WITH MARKINGS TO SHOW CHANGES MADE

IN THE CLAIMS

Claim 2 is cancelled.

Claim 1 is amended as follows:

1. (Twice Amended) A positive active material for a lithium secondary battery of which the surface is coated with a metal oxide, wherein the positive active material compound comprises  $\text{Li}_a\text{Ni}_{1-x-y}\text{Co}_x\text{M}_y\text{O}_2$  and M is a metal selected from the group consisting of Al, Mg, Sr, La, Ce, V, and Ti, and  $0 \leq x < 0.99$ ,  $0.01 \leq y \leq 0.1$ ,  $0.01 \leq z \leq 0.1$ , and  $1.00 \leq a \leq 1.1$ , wherein the metal oxide coated on the surface of the compound is an oxide of a metal selected from the group consisting of Mg, Ti, Al, V, Co, K, Ca, Na, and  
B.